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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,877	01/31/2000	Zhigang Fang	34098/GTL/S61	4072

24574 7590 12/04/2003

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EXAMINER

JENKINS, DANIEL J

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 12/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/494,877

Applicant(s)

FANG ET AL.

Examiner

Daniel J. Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The Examiner has carefully considered Applicant's response of 8/29/03, and in light of Applicant's argument, withdraws the prior rejection, the Examiner agrees that Fang et al. fails to disclose the composition range of alloys in the binder phase. At this time the Examiner makes a new rejection, which is accordingly not made final.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinrich et al. '546 (Heinrich et al.) in view of British Patent 1,450,654 ('654).

Heinrich et al. disclose the invention substantially as claimed. Heinrich et al. disclose a cermet composition comprising:

a WC hard phase in an amount of 81-95% (col. 2, lines 3-4);

a binder phase in an amount of 5-19% (col. 2, lines 1-3);

Heinrich et al. further disclose wherein the binder phase is an alloy of 40-90% Co, >4% Fe and >4% Ni (col. 3, lines 10-26), and provides an example in Table 1 with equal amounts of Ni and Fe (28%) and 47% Co.

Heinrich et al. therefore disclose binder alloy amounts overlapping and approximating those as disclosed by Applicant to result in the desired thermal coefficient expansion characteristics, establishing a prima facie case of obviousness.

Heinrich et al. discloses WC as the hard phase.

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'654 teaches in the same field of endeavor that WC and alloys of WC, TiC and TaC can be used in cutting Applications to obtain desired application results (lines 28-55).

It would have been obvious to one having ordinary skill in the art to use the hard grain alloys as taught by '654 in the invention of Heinrich et al. in order to obtain cutting inserts of desired hardness and toughness based on application as taught by '654. The Examiner notes that carbonitrides are well known in the art as equivalents to carbides in certain cutting applications and as such, would be obvious to introduce in minor amounts in the invention in order to obtain desired cutter characteristics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 703-306-4157. The examiner can normally be reached on M-TH 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9593.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Daniel J. Jenkins
Primary Examiner
Art Unit 1742

dj
November 15, 2003